"Do It Now!" Yakima, Wash, and the Campaign Against Rural Typhoid

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In 1911, Yakima, in western Washington, suffered a typhoid epidemic that turned the nation's attention to a crisis in public health. The response exemplified the ideals of the "new public health" as a more proactive, scientific, federal commitment to the problems of rural America.

A US Public Health Service investigation led by Dr Leslie Lumsden found a typhoid mortality rate of nearly 5 times the national average. The cause was bad sanitation. Typhoid rates dropped dramatically as the community adopted pragmatic solutions. Lumsden helped organize a "Do It Now" sanitation campaign and one of the country's first city–county health units. Yakima provided a model for other rural areas and small towns across the country.

This episode in one of the country's most productive fruit-growing regions raised serious questions regarding the geographic dynamics of disease. For Lumsden and other like-minded health officials, the countryside represented a dangerous reservoir of disease, a particular threat to the nation's agriculturally dependent urban populations. Yakima showed that the country needed a more comprehensive public health system that addressed urban and rural problems.

AT THE TURN OF THE 20TH century, Yakima, Washington, was an improbable site for a health crisis of national implications. Its dry climate and agricultural abundance seemingly defined salubrious. Such western locations attracted the sick—respiratory sufferers in particular—as a wellness oasis. The region could in no way be confused with the malaria- and pellagra-plagued South or the polluted and diseased industrial zones of the Northeast. Yet, during an economic boom at the turn of the century, Yakima became known for infection as much as for apples. Yakima offered a prime example of the nation's problems with poor sanitation and public failure to link these conditions with disease.

The city and county of the same name are located in the most productive fruit-growing region in the United States. By the last years of the 20th century, Washington State cultivated nearly 40% of the country's apple crop, with the Yakima Valley representing 40% of that total. In addition, the region is a leading producer of cherries, grapes, pears, and mint along with cereal grains and hops. Aptly described as the "Fruit Bowl of the Nation," the Yakima Valley is situated on the east side of the Cascade Mountains, 145 miles southeast of Seattle. Although it lies in the shadow of the rainy mountain range, it receives less than 10 inches of precipitation a year and enjoys nearly 300 days of sunshine and a prolonged growing season of 195 days.[1]

Home range of the Yakima Indian Nation, the region was explored by the Lewis and Clark Expedition and entered by White missionaries and settlers in the mid-19th century. By 1880, the region had a small White population engaged in cattle ranching and farming along the river bottoms. In 1884, the Northern Pacific Railroad connected the town, then known as North Yakima,[2] and triggered the first stage of a dramatic agricultural boom. Settlement in the area swelled as the railroad and irrigation projects enticed newcomers. Irrigation justified the railroad's existence in the region. In 1906, the federal government purchased the largest private water concern and promoted water-diversion projects through Reclamation Act auspices. The growing water system that year diverted water from the Yakima and Naches rivers into 55 canal systems and thousands of ditches and onto 121 000 acres. In the following decades, government water promotion continued the expansion of acreage to many times that amount.[3]

Excluding the native population, Yakima County grew from 2811 residents in 1880 to 13 462 in 1900. That number more than tripled to 41 709 just a decade later.[4] Several smaller towns sprang up in the valley as the fruit economy grew. The population increase included fruit growers and a supporting merchant class, as well as a large number of farmworkers and packinghouse employees. The situation was analogous to the hundreds of mining or oil towns that boomed in the 19th century. In this case, however, Yakima experienced a "fruit rush." One visitor to the region described Yakima as "distinctly and intensely American," a locality where there "is much money to be made, and to be made rapidly, and the people generally are energetically engaged in making it."[5] But the population influx, huge capital inflow, and expansion of high-production orchards compromised the rural values and habits native to Yakima.

In the flurry of accelerated population and economic growth, Yakima's government functions lagged well behind need. Growth outpaced the local government's ability to supply municipal functions and infrastructures. Of course, Yakima's problems were typical of many American farming communities at the time. The dramatic growth of the region essentially overwhelmed the community, and tax proposals for

municipal infrastructure expansion met stiff opposition from residents who still thought of Yakima as a small town that did not need such interference. A municipal water supply and sewerage existed but covered only a portion of the city. The remainder of the city and county used privies with poorly constructed vaults or cesspools. Garbage collection was almost nonexistent, and residents often cast household waste, including "kitchen slops," into the streets. Manure from a large horse population added to the problem. Flies, which bred in enormous swarms, especially in the summer and early fall, created a health hazard. Restaurants followed few sanitary practices; the better establishments were characterized as "dirty."[6]

Irrigation, which energized the local economy, now also presented a health threat. Ditch water not only was used to grow fruit but also constituted part of the city and county water supply. This concerned people little. Children, it was said, "thought nothing of lying on their stomachs on hot summer days to drink from a conveniently located ditch."[7] Residents routinely built privies above or adjacent to ditches in an attempt to use flowing water for waste removal, contaminating the water they might later use to cook or bathe. Even when privies were located some distance from water, they presented a problem. In many cases, waste flowed from vaults and could easily be spread by livestock or wild animals. Germs found easy pathways into the homes, and especially the kitchens, of farm families, or into flowing ditches and the local community. Shallow wells offered an alternative to the ditch, but irrigation and surface contaminants corrupted the source.

The region's increased fruit production took place primarily on 5-acre orchards. Since individuals with little capital could enter the business with some ease, the population density increased, with families, livestock, and fruit orchards in close proximity. A 1911 US Public Health Service (PHS) investigation compared these small family orchards to an urban suburb.[8] All things considered, it is little wonder that Yakima experienced a public health crisis. The community was wholly unprepared for a typhoid epidemic with the highest morbidity and mortality rate in the country's history.

Picking crew captured on film about the time of the typhoid epidemic in the first years of the 20th century. (Photo courtesy of Yakima Museum and Historical Association, Yakima, Washington.)

"A BLACK EYE FOR A WHOLE LOT OF SICKNESS"

Yakima County had employed a physician since the early days of the district's formation. This in itself was not unusual. Counties in the western United States often followed the example of older, eastern states and designated a physician as a first order of business for a newly created local government. National or statewide health and welfare systems did not exist, and care for the indigent and the indigent sick—a county responsibility—was assigned to a person in the community. A physician oversaw the arrangement for care in the county's name and also served as coroner, decreed quarantines, and acted as a social worker.

By 1907, because of problems with typhoid, a single physician was not capable of dealing with Yakima's needs. The city hired a health officer to organize garbage collection, promote expanded water treatment, and develop health ordinances. Although this was considered a pragmatic solution to a community health problem, people opposed the expanding authority of government as interference in their personal lives and feared

the increased tax burden. To ease the opposition, the officer worked to improve awareness of the health threat at hand. He gave public lectures, sponsored educational films, and attempted to enforce, with virtually no success, health ordinances.[9] A shift in the public's perception of the value of public health initiatives appears to have occurred; nonetheless, typhoid came in alarming waves.[10]

Typhoid fever, also known as enteric fever, is a bacterial infection caused by a species of salmonella. Victims suffer severe diarrhea or constipation, high fever, abdominal pain, fatigue, and delirium. Rose-colored spots appear on the chest and abdomen. The bacterium infects the blood and often the gallbladder, liver, and spleen, and it may cause hemorrhages. The most common form of transmission is by contact with the feces of the infected. The mortality rate is 10% or higher. Some recovered patients become carriers of the disease for weeks or years. Such was the case with New York's Mary Mallon, known as "Typhoid Mary," whose case emerged and gave fame to the illness as an epidemic struck Yakima.[11]

Typhoid shadowed Yakima's growth from the 1880s. Newspapers reported that the disease raged intermittently in the first years of the 20th century. In 1908, the disease resurfaced in a virulent form and received growing attention as the death toll for the city hit 25. The following year, 21 died; 28 died in 1910. That year, the city of Yakima's typhoid mortality rate of nearly 200 per 100 000 was the highest in the country, 5 times the estimated national average. A 1910 Washington State Board of Health investigation reported that the entire county had at least 600 to 800 cases and 62 deaths. The board estimated that the disease cost the valley $519 440 in "wealth destroyed."[12] The total undoubtedly reached a higher number, because deaths of people living on the Yakima Indian Reservation were not counted. Alarmingly, Yakima's typhoid deaths actually topped those from tuberculosis and pneumonia.[13]

According to Leslie Lumsden, Yakima had an extraordinarily large horse population. (Photo by Lanterman-Whitehall, circa 1900. Courtesy of Yakima Museum and Historical Association, Yakima, Washington.)

Such a high disease incidence naturally concerned residents. Yet, before the summer of 1910, Yakima's business and political leaders denied that a problem existed, or else they suggested that the incidence of disease was similar to that in other areas or was blown out of proportion. Government officials and business leaders attempted to "hush the typhoid matter" to allay public fear and preserve the national integrity of the valley's fruit crop.[14] Dr Phillip Frank, the county health officer, reported 28 cases of the affliction in July, but he contended that the infection came mostly from outside the county. "Yakima," said Frank, "gets a black eye for a whole lot of sickness," and added that the actual numbers of disease cases were "exceedingly small."[15]

Frank's statement embodies a revealing epidemiologic philosophy of the time, implying that the disease came from the outside and that the health threat traveled inland with Asians and Hispanics or was endemic to Native Americans. Xenophobia fortified opposition to the expansion of water facilities and health laws, since farm laborers did not generally fall within the bounds of tax-paying property owners, nor were they bound by health ordinances. Frank's defense of the

Yakima Avenue in the first years of the 20th century. (Photo by Ashahel Curtis. Courtesy of Yakima Museum and Historical Association, Yakima, Washington.)

community also reflects a common belief that only the obviously ill could be a source of infection. In the early 20th century, public health and medical researchers determined that healthy people—Mary Mallon was an infamous example—could carry and transmit typhoid.[16] Hardly on the forefront of medical science, Frank sought simple explanations that did not offend the fruit growers or threaten the agricultural boom. Nonetheless, word spread. Porters on the Northern Pacific Railroad, newspapers reported, advised passengers not to drink the water at the Yakima stop. Soon, national fruit buyers started to ask serious questions about the infections.[17]

THE COMMUNITY RESPONSE

In August 1910, the typhoid crisis could no longer be hushed. Frank Bayne, the popular owner of a women's ready-to-wear clothing store, died suddenly—the fifth death that season. Six days later, a prominent businessman succumbed minutes before his mother arrived by train from Ohio. The same month, a cook in a Japanese restaurant committed suicide after being infected.[18] These deaths and others aroused a public outcry and increased demand on the city council to "clean the alleys and streets, care for garbage, and enact rigid supervision of kitchens and restaurants."[19] One local newspaper claimed that the health department had perpetrated a subterfuge and that it was obvious that Yakima's main streets, lined with "old papers, fruit peelings, and other filth lying where it was flushed" must be linked to the typhoid deaths. The health officer's "customary post-funeral excuses," the editor declared, no longer "appeal to this paper."[20]

Community organizations such as the Masonic Lodge, the Commercial Club, and the women's Portia (garden) Club implored the city council and county commissioners to start a "concerted action to clean up the city."[21] Growing alarm from national fruit brokers aroused business leaders to the economic dangers of infectious diseases.[22] Yakima's City Council sent a request to Surgeon General Walter Wyman of the US Public Health Service (PHS), who, following the existing policy regarding domestic issues that required solicitation from the state government, politely referred the matter to the Washington State Board of Health.[23]

The Board of Health responded with a 3-month field investigation and published a report with recommendations by Dr Eugene R. Kelley and Thomas R. Wilbur. The report concluded that Yakima's typhoid was endemic and subject to seasonal intensification from May to October. Most of the cases seemed linked to the city's unsanitary conditions. Yet water sources, while having a "number of objectionable features," showing evidence of "human and animal excrement," and tending to "favor the prevalence of typhoid fever in its users," could not at the time of the investigation be directly linked to the epidemic. Still, the report stated as "fact that 70% of the residences . . . were in an insanitary condition." It concluded that "numerous possibilities of conveyance of the germs from the discharges of patients to the food of others" existed and that the disease was unquestionably linked to the "public eating houses where, to a considerable degree, the sanitary conditions are far from ideal."[24]

The report offered 5 "absolutely essential" recommendations for the reduction of the disease. The city and county should eliminate all insanitary conditions, prohibit cesspools, and require frequent cleaning and flyproofing of all open toilets. The city's water supply should be patrolled for sanitation dangers and a "proper purification system" should be erected. Sewerage required extensions in a timely fashion corresponding with population growth. Finally, the report recommended creation of a health department capable of tracking incidences of disease and advising citizens on sanitary measures.[25]

The Board of Health's report motivated public officials to a degree. In January 1911, the city hired Dr Thomas Tetreau as health officer. Tetreau, sporting a severe disposition, a derby hat, and a black mustache, was remembered for "not being a local man." He created the region's first laboratory, pressed city residents to clean up garbage, promoted sanitary disposal habits, and conducted an

aggressive public education program despite the "generally antagonistic" attitude of residents.[26] Tetreau also issued a large number of notices for health code violations. In some cases, he issued 5 or 6 warnings and then directed the city attorney to swear out warrants for the arrest of violating property owners.[27] Naturally, such actions did little to increase popular esteem for the man or the health effort, which coupled violators with the spread of the disease. Yakima, despite its sharp population growth, was still a small town, and the suggestion of responsibility for illness or death generally met with a defensive response. Nonetheless, Tetreau's hard line worked. Typhoid rates for that year dropped, with the exception of one explosive outbreak caused by industrial negligence.[28]

LESLIE LUMSDEN: RECOGNIZING THE OBVIOUS

Between May and June 1911, typhoid claimed 5 lives in a well-defined section of Yakima City.[29] A Citizens Health Board, composed of several women's clubs and the local commercial association, pressed the city, county, and state governments for stronger investigative measures. This time, the Washington State Board of Health entreated Surgeon General Wyman for assistance. Wyman agreed, with the understanding that the city and county would pay all necessary expenses and that under federal policy, the PHS could act only in an advisory capacity for this domestic issue. He then ordered Dr Leslie Lumsden to proceed immediately to Yakima and work with local health officials in determining cause and establishing prevention measures.[30]

Lumsden, an epidemiologic pioneer, had had a productive career with the PHS that began with the Spanish-American War. Recognized for his work in the promotion of rural sanitation, Lumsden also was a man of enormous political and public relations savvy. In 1906, the PHS had created a special Typhoid Board to investigate a severe outbreak in Washington, DC. Under the leadership of Dr Milton J. Rosenau, director of the PHS Hygienic Laboratory, Lumsden and other researchers studied water character, flies and other insects, milk and food sanitation, inspection practices, and other disease pathways. The District of Columbia work and a 1910 Huntsville, Ala, inquiry established Lumsden as a typhoid expert and a leading rural sanitation activist.[31] In 1911, he traveled to Washington State with the hope of developing sanitation and public relations approaches to improve health conditions in rural America. His ideas crystallized in Yakima.

Lumsden conducted a survey of Yakima inhabitancy that included a detailed look at general sanitation as well as social and economic conditions in the valley. He was struck by the region's growth, the phenomenal fertility of the land, and the general prosperity. Still, he identified Yakima's smashing growth as an obstacle keeping local political leaders from instituting fundamental community programs. The lack of a sanitary water supply was one sign of an overall neglect of public health and, further, a source of disease transmission that was easily remedied. Lumsden witnessed, for instance, the "grossly insanitary" open mixing of water from the district's shallow wells with water from privies, privy vaults, and cesspools. These conditions, combined with the extensive irrigation, led to "a free interchange of typhoid infection" in urban and rural districts.[32]

Lumsden took special interest in privies. He eventually invented a sanitary privy and published, with Charles Stiles and Allen Freeman, articles on design and function of both "dry" and "wet" structures.[33] In Yakima, poorly constructed and poorly situated privies, exposed water sources, and polluted soils were easily accessible to chickens, dogs, cats, and other animals that spread excreta. Flies swarming around the structures greatly alarmed Lumsden. He estimated that Yakima City alone contained 800 unsanitary privies and about 200 unsanitary cesspools.[34]

"The hordes of flies astounded even Lumsden, whose business was filth."

Dairy production was also of special concern. During his research in Washington, DC, Lumsden had found that contaminated milk spread typhoid and helped explain the high rate of the disease among children there. In Yakima, he estimated about half the city's milk supply originated from cows within the city itself. Sanitation at family-run dairy operations was, Lumsden reported, "very poor." Likewise, the commercial dairies proved "far from satisfactory." Water used in washing milk cans and bottles flowed from potentially dangerous irrigation ditches. One dairy cooled full bottles of milk by placing them in irrigation ditch water, "which at the time was grossly polluted with the contents of a number of privies in the immediate neighborhood." At another dairy, Lumsden inspected the pasteurization process and found several inches of dead flies on a final filter before the bottling process.

BUSHELS OF FLIES AND INDUSTRIAL NEGLIGENCE

The hordes of flies astounded even Lumsden, whose business was filth. Surveying the general unsanitary conditions, which had actually improved in the previous few months under Dr Tetreau's leadership, Lumsden said that the insect population was by far the largest he had ever seen. In response, businesses and "interested individuals" began placing 2- or 3-foot-long traps around various points in the city, especially near groceries, restaurants, and stables. One trap collected more than a bushel and a half of flies in an 8-day period. Local observers estimated that the improved sanitation measures and trapping cut the fly population in half by the middle of July.

Of immediate concern was the unusual and explosive nature of the typhoid outbreak in May and June of 1911. The outbreak surfaced in a 10-day period and during a time when relatively few cases had been reported in previous years. Through a process of elimination, Lumsden found that milk, local produce, and restaurants, although a constant hazard, were not the cause of the episode. The city's water supply, however, had been used "by a sufficient number of cases to be implicated as the principal

source of infection." After further investigation, the culprit was identified as the city's connection to the Cascade Lumber Company sawmill log pond, which was linked to the city's water supply to guarantee pressure during fire emergencies. A check valve had been released, possibly because municipal water pressure had fallen, although it is not clear whether it was accidental. More than 500 employees of the sawmill used privies overhanging a canal that fed the pond network, which, in this circumstance, entered the municipal water system and infected residents.[35]

The incident occurred at a time when the Yakima City government was under increasing pressure to provide treated water for the growing town population. The structural relationship with the mill was eliminated as a result of Lumsden's investigation. Public outrage provoked the city health officer to charge the Pacific Power and Light Company, the operator of the water system, with criminal negligence for allowing the mill water to pour into the city's mains, which led to at least 54 typhoid cases and 5 deaths. A justice of the peace fined the utility $99.99 on that charge. The company quickly installed tanks and a chloride purification system for water supplies originating in the canal system.[36]

THE SANITARY LEAGUE

Considering the general lack of sanitary practices, Lumsden concluded that causes of the high prevalence of typhoid in Yakima were obvious. He recognized that progress had been made with the creation of the health officer position and the beginning of local sanitation efforts, yet the process needed enhancement. He likewise recognized that Yakima's prosperity offered some good resources for alleviating community problems and creating a model for other rural communities. Lumsden galvanized public concerns through a series of lectures, especially to civic organizations that had been pressuring local officials. By discussing the nature of typhoid and other communicable diseases, he fired up public spirit in the community to make sanitation a matter not only of health but of civic duty.

Community organizations such as the Commercial Club, the Women's Portia Club, the Masonic Lodge, and the newly formed medical society advanced several programs to the city council and county commissioners. First, the political bodies agreed to combine the health duties of the city and county into one office and to share funding, eliminating the confusion and disagreement over authority. Dr Tetreau, then city health officer, was named to the position with an annual salary of $5000, an extraordinary sum for the time. The combined city–county unit also hired a bacteriologist, 2 trained public health nurses, and an assistant sanitarian.[37] The city and county passed a series of ordinances requiring the inspection of food in markets and restaurants and the protection of watersheds from "promiscuous defecation and urination."[38]

> *"Yakima was proof that collective health achievements could be obtained by changing deadly habits."*

The second phase of the health campaign involved arousing public sentiment through the creation of a "Sanitary League." Composed of civic groups, the league intended to include a broader segment of the Yakima community.[39] Membership required an applicant to obtain a sanitary privy or be connected to the sewerage system, use flyproof garbage and manure receptacles, and generally practice sanitary standards. After compliance, the applicant paid a 25-cent league membership fee, which was used for charitable sanitation work. A mark of membership included receiving a button reading "DO IT NOW!" The expressed intent of the buttons, as well as of storefront banners bearing the same motto, was to "enlarge the enrolled membership to such an extent that every good citizen would have a feeling of shame if seen on the streets without . . . one of the distinctive buttons."[40]

A health office opened. Exhibitions of sanitary privies of Lumsden's design, manure boxes, garbage receptacles, fly traps, and other paraphernalia served with charts and photographs to make the office an educational contact point. The health officer, along with the public health nurses and a sanitarian, gave regular instruction on sanitary methods and the basics of the nature of disease. Sanitary League leaders used the space for organizing community activities that included a "Clean-Up" weekend and "Sanitation Day."[41]

Community groups, and especially women's clubs, energized the Sanitary League. Following examples from across the country such as the Ladies Protective Health Association in New York City, Yakima's women grasped the role of municipal housekeeping and advanced the value of public health initiatives. On July 1, 1911, the women of Yakima voted for the first time. The election involved bond funding for a municipal power plant and the reorganization of the county's government. The vote transformed women's roles in community affairs beyond the traditional voice of the community's conscience.[42]

The Yakima sanitation campaign embodied the progressive political and social mission of the "new public health." At the beginning of the 20th century, proactive local health boards in major cities reduced infectious disease rates and mortality. The adoption of laboratory procedures, hiring of sanitarians and public health nurses, funding for education programs, and guidelines for food inspection and waste removal produced this positive effect. No doubt the change in the public's consciousness had the most important impact. Communities in rural America lacked the financial resources and political will to develop such programs. Yakima, in this regard, was the exception, but it served as a model nonetheless for the worth of local actions and proved the importance of changing individual habits.

By August, the campaign had made a noticeable difference. The editor of the *Yakima Daily Republic* noted in an editorial that the "intelligent and comprehensive effort . . . put the town in good sanitary condition and the results have been almost startling." He urged readers to keep

working, "no matter the cost," for in a year or two typhoid would be "unknown" and Yakima "known again as one of the most healthful places in the Northwest."[43] Statistics affirm the editor's charge. Yakima's typhoid rates dropped 90% the first year. By 1913 the disease, which killed on average 57 people a year at the decade's beginning, claimed only 3 lives.[44]

A MODEL OF RURAL PUBLIC HEALTH

Had the story ended there, the valley's typhoid years might have slipped into the past, occasionally remembered by locals as an unfortunate episode of the region's boom times. Yakima, however, came to serve a larger purpose. Its name elevated national consciousness as a model of rural health reform. The Yakima example stimulated government action and illustrated the value of proactive public health programs. Its historic importance rests not so much with the lives lost there but with the countless unknown lives saved elsewhere.

Although Yakima is a name familiar to public health historians for its connection to typhoid, rural health, and city–county combined health departments, it did not have the first city–county health department; that distinction belongs to the city and county of Louisville, Ky.[45] These counties, along with Guilford County, NC, established local health organizations that spearheaded a change of focus with regard to the progressive health movement to include rural locales. By the end of the 1910s, 186 such departments existed in 23 states and the movement was growing. By 1932, the number had risen to 811, with units in nearly every state. Stimulated by federal funding and expertise, expanding state government health departments, and philanthropic—mostly Rockefeller Foundation—contributions, the "County Health Unit Movement" improved conditions for millions in the American countryside.[46] Yakima supplied a structural and civic action model for those subsequent departments.

Moreover, Yakima was proof that collective health achievements could be obtained by changing deadly habits. The community enjoyed some obvious advantages: a dry climate, relative prosperity for program support, and its population—not largely barefoot and seemingly stuck in the past, but advancing pell-mell into the future. For Leslie Lumsden, Yakima's advantages were beside the point. Yakima succeeded. The creation of the city–county health unit, the civic activism, and the adoption of simple sanitary practices dropped the highest typhoid rate in the country to among the lowest. Speaking before the 1912 Annual Conference of State and Territorial Health Officers, Lumsden recounted the "sure-enough campaign against typhoid," saying that the case was a perfect model. He told the officers: "Now, what Yakima County has done I believe that many other counties in the United States can do, and I believe that the demonstration made in Yakima County will have a far-reaching effect."[47] Two years later, testifying before Congress in an attempt to secure appropriations for local sanitation survey work, Lumsden again used Yakima as a case in point. "Rural sanitation is one of the great problems now confronting our nation," he stated. He then assessed the totality of the danger:

> Under existing conditions there is a free interchange of typhoid infection between our cities and our rural districts. A city may be in such sanitary conditions as to be practically proof against endogenous infection and still suffer severely from infection introduced in food supplies from the rural sections.[48]

He hypothesized that lettuce or celery irrigated with water containing the typhoid bacillus might infect people hundreds, even thousands, of miles from the farm. A city might receive its produce, meat, and dairy products from several different states. New York City, he speculated, obtained its milk supply from 10 states. The protection of urban populations required promotion of rural health initiatives; infection was an interstate problem. Thus, the federal government maintained obligation to engage in domestic health promotion.[49]

UNCLE SAM AND THE "FAILURE TO SOLVE THE PRIMAL PROBLEM"

The campaign gained additional support through the popular press. In the August 1916 issue of the *Saturday Evening Post*, in an article titled "Uncle Sam Cleans Up Springfield," Lumsden recounted the beneficial work conducted at Yakima as well as Wilson County, Kansas, and Lawrence County, Indiana, where typhoid rates had been cut drastically. In these communities and others like them, infectious diseases transcended politics and finance, the article contended, when citizens were "absorbed with the vision of little babies passing from convulsions into the coma which preceded death . . . the murrains which afflict man through his failure to solve the primal problem . . . and confronted with proof positive that they were eating and drinking the forbidden and cursed thing."[50] Such publicity produced hundreds of sanitation survey requests from communities in nearly every state. The PHS could not satisfy so many requests. Still, the overall effect advanced public health into popular consciousness and led to more responsibility for American governmental bodies.[51]

Sanitation survey and demonstration work continued under a PHS pilot program until 1916, when federal health concerns shifted to include military issues. Congress appropriated funding for rural sanitation work or "surveys." Under the multipurpose program, PHS teams entered communities requesting assistance, investigated sanitation practices, made laboratory tests, organized community groups, and urgently communicated the connection between public health and civic duty. By December 1916, 16 counties in 14 states participated in the investigation.[52] Lumsden remarked in a memorandum to US Surgeon General Rupert Blue that a "marked reduction in disease and death rates resulted and specific typhoid rates dropped on average 75%." He argued for continued support, observing that by "the many natural advantages of country life the residents of our rural districts should be much healthier than those of the cities."[53] Yet the death rate was only about 2% less than the urban rate for most areas and nearly equal in many rural districts. In a shrewd political maneuver, Lumsden urged his boss to agitate for increased funding

on a domestic need basis and then characterized rural health as a national military necessity as the country veered toward the Great War.

After the war, PHS rural health action continued with the County Health Unit movement. The creation of county health units served to energize local communities and state governments and dovetailed nicely with other federal efforts, such as the Chamberlain–Kahn Act of 1918 to eradicate venereal diseases and the Sheppard–Towner Act of 1921 to improve infant and maternal care. Rural American health received increased federal attention during the Great Depression through the Farm Security Administration and Social Security Act programs.[54] Such legislation and resulting programs serve as prominent guideposts for attempts to improve conditions in the American countryside that began decades before in places like Yakima. ■

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Endnotes

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